

A Key to Estuarine Polychaetes in New South Wales

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A key to 184 species of estuarine polychaetes in New South Wales is given together with a reference to an adequate description of each named species.

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INTRODUCTION

The estuarine polychaete fauna of New South Wales includes many undescribed species and new records. Sheltered bays will share many species in common with estuarine areas. At present we know of 184 species occurring in N.S.W. estuaries of which 125 have been described. Many other species remain to be described, some perhaps belonging to families not included in this key, for example Chrysopetalidae and Amphinomidae. Many of the descriptions were published early this century in journals with limited circulation and often not in English. No key exists to enable most of these species to be identified or differentiated from species already described and this key is intended to remedy this situation.

The key is based on material collected during surveys of Careel Bay (Pittwater) and Gunnamatta Bay (Port Hacking) by the authors, from cores collected from *Posidonia* beds along the coast of New South Wales (PH and others) and other material from the Australian Museum collections. It is likely that many more species will be found in estuarine situations in New South Wales, but the key should provide a reasonable guide to at least the larger species. As it is possible that closely related species not in the key could be confused with keyed species, identifications made with the key should be checked against the literature. The number in brackets accompanying each named species indicates where an adequate description of that species may be found, using the numerical order of the references cited. Species keyed only to genus may represent undescribed species, new records that we have not been able to confirm or may refer to incomplete material that did not permit positive identification. An indication of other recorded species from Australia that may occur in N.S.W. estuaries is given by Day and Hutchings (1979).

The key is based on Day (1967) with some modifications and additions using the taxonomy of Fauchald (1977). Reference should be made to Day (1967), for diagrams indicating the important features of individual families and for a glossary of the terms used.

KEY TO ESTUARINE POLYCHAETES IN N.S.W.

(modified after Day, 1967)

Refer-
ence

- | | | |
|--|---------------------|---|
| 1. —Most of the following characters; prostomium with sensory appendages; pharynx armed with jaws or teeth; parapodia well developed, compound setae often present | Polychaeta Errantia | 2 |
| —Most of the following characters; prostomium usually | | |

lacking sensory appendages, often fused to peristome, which may bear grooved palps, buccal cirri, stout setae or branchial crown; compound setae rarely present.		Polychaeta Sedentaria	68
Polychaeta Errantia			
2.	— Elytra present on many segments		3
	— Elytra absent		12
3.	— Compound setae absent; elytra and dorsal cirri alternate fairly regularly.	F. Polynoidae	4
	— Compound setae present; elytra on alternate segments anteriorly, from about setiger 25 onwards on all segments.	F. Sigalionidae	11
4.	— Lateral antennae terminal, arising at level of median antenna, 15 pairs of elytra	<i>Parahalosydna chrysostichtus</i>	(13)
	— Lateral antennae arising below level of median antenna, 15-16 pairs of elytra		5
5.	— Lateral antennae subterminal; ventral lamellae present.	<i>Paralepidonotus ampulliferus</i>	(13)
	— Lateral antennae ventral; ventral lamellae absent.		6
6.	— Neurosetae with blades tapering to fine tips, unidentate.	<i>Antinoe</i> sp.	
	— Neurosetae with blades ending in stout tips, uni- or bidentate		7
7.	— One or more of the basal serrations on both notosetae and neurosetae enlarged to form spinous pockets; prostomium without frontal peaks	<i>Scalissetosus</i> sp.	
	— Basal serrations on setae not enlarged, prostomium with frontal peaks.	<i>Harmothoe</i>	8
8.	— Elytra ornamented with multifid tubercles	<i>Harmothoe</i> sp.	
	— Elytra ornamented with simple tubercles.		9
9.	— Elytral tubercles with flat-topped apices	<i>Harmothoe</i> sp.	
	— Elytral tubercles conical		10
10.	— Elytral tubercles numerous	<i>Harmothoe</i> sp.	
	— Elytral tubercles short, conical, few, sometimes absent, elytra, margins with elongate papillae.	<i>H. praeclara</i>	(13)
11.	— Median antenna with basal lappets on ceratophore ..	<i>Shenelais</i> sp.	
	— Median antenna absent or papilliform and lacking ceratophore	<i>Sigalion ovigerum</i>	(15)
12.	— Dorsal and ventral cirri foliaceous.	F. Phyllodocidae	13
	— Dorsal and ventral cirri not foliaceous.		17
13.	— Five antennae, no occipital papilla; 4 pairs of tentacular cirri	<i>Eumida sanguinea</i>	(13)
	— Four antennae and often an occipital papilla; 3-4 pairs of tentacular cirri		14
14.	— Setae present on third, or second and third, tentacular segments		15
	— Setae absent from all tentacular segments		16
15.	— Setae first present by second tentacular segment; rusty red in colour	<i>Genetyllis castanea</i>	(3)
	— Setae first present by third tentacular segment; colour otherwise.	<i>Paranaitis</i> (4 spp)	
16.	— Pharynx with regular rows of papillae at sides of base, first 3 segments dusky, later segments with 3 dark spots; dorsal cirri large and cordate anteriorly	<i>Anaitides longipes</i>	(3)
	— Pharynx with irregularly arranged papillae; body		

	pale to dark brown with dark intersegmental bands; dorsal cirri almost semicircular	<i>Phyllodoce novaehollandiae</i>	(13)
17.	— Prostomium with ventrolateral palps		18
	— Prostomium without palps		51
18.	— Palps biarticulate, with stout basal joint and smaller distal joint		19
	— Palps simple		35
19.	— Compound setae absent; tentacular cirri two or fewer	F. Pilargidae	20
	— Compound setae present; tentacular cirri four pairs or more		21
20.	— Prostomium with three antennae; pharynx muscular	<i>Sigambra parva</i>	(3)
	— Prostomium with two antennae; pharynx epithelial	<i>Pilargis</i> sp.	
21.	— Jaws, if present, usually styliform, denticles absent; tentacular cirri often jointed	F. Hesionidae	22
	— Two toothed jaws present and often horny denticles; tentacular cirri smooth	F. Nereidae	25
22.	— Six pairs tentacular cirri		23
	— Eight pairs tentacular cirri		24
23.	— Two anterolateral antennae and one median antenna, notosetae 1/2 capillaries	<i>Ophiodromus</i> cf. <i>agilis</i>	(3)
	— Two anterolateral antennae only; notosetae present or absent	<i>Nerimyra</i> sp.	
24.	— Notopodium reduced, with few capillary setae	<i>Gyptis</i> sp.	
	— Notopodium not reduced, with numerous capillaries.	cf. <i>Gyptis</i> sp.	
25.	— Anterior apodous segment absent behind peristomium; antennae absent; paragnaths absent . .	<i>Micronereis</i> sp.	
	— Anterior apodous segment present behind peristomium; two antennae present; paragnaths present or absent		26
26.	— Chitinous paragnaths entirely absent; a transverse series of glandular ridges at base of anterior parapodia	<i>Australonereis ehlersi</i>	(13)
	— Chitinous paragnaths present; ventral glandular ridges absent		27
27.	— Paragnaths all separate and conical		28
	— Paragnaths include pectinate or transverse bars.		34
28.	— Chitinous paragnaths present on both basal and maxillary rings		29
	— Chitinous paragnaths present on maxillary ring only .	<i>Ceratonereis</i>	33
29.	— Falcigers present in posterior notopodia, few setae; paragnaths few, absent on I, V and VI, II-1, III + IV- 2-4, VII + VIII-5	<i>Nereis posidoniae</i>	(13)
	— Falcigers absent in posterior notopodia	<i>Neanthes</i>	30
30.	— Notopodial lobe very large on both sides of dorsal cirrus in median and posterior segments	<i>Neanthes oxypoda</i>	(9)
	— Notopodial lobe not particularly enlarged.		31
31.	— Areas I and V of pharynx lacking paragnaths	<i>Neanthes</i> sp.	
	— Areas I and V of pharynx with paragnaths		32
32.	— Paragnaths of area I-2, and area VI-3 cones in inverted triangle	<i>N. vaalii</i>	(13)
	— Paragnaths of area I-4 in triangle, and areas V + VIII — continuous band of cones 4-6 deep	<i>N. cricognatha</i>	(13)
33.	— Prostomium deeply cleft between antennae; dorsal cirri long; no simple neuropodial falcigers	<i>C. mirabilis</i>	(13)

- Prostomium not cleft; dorsal cirri short; one large simple falciger in posterior neuropodia *C. erythraeensis* (13)
34. — Areas IV, VII + VIII of pharynx with cones and pectinate paragnaths, posterior notopodia with 2-3 homogomph falcigers *Platynereis dumerilii antipoda* (13)
- Area VI of pharynx with continuous transverse series of cones extending across V and VI *Perinereis* cf. *brevicirris* (9)
35. — Barrel-shaped proventriculus posterior to pharynx, pharyngeal armature variable. *F. Syllidae* 36
- Proventriculus absent, four or more pairs of jaws. 56
36. — Ventral cirri absent; dorsal cirri not annulated *Autolytus* sp.
- Ventral cirri distinct, dorsal cirri annulated or smooth. 37
37. — Palps separate; dorsal cirri jointed 38
- Palps fused basally or for at least half their length; dorsal cirri smooth 43
38. — Setae few, simple, enlarged, with 2 teeth, terminal one bifid *Haplosyllis spongicola* (3)
- Setae mainly or entirely compound 39
39. — Mainly compound setae anteriorly, then include a few large simple setae with Y-shaped prongs *Syllis gracilis* (3)
- Only compound setae present 40
40. — Blades of some superior setae much longer than the rest; dorsal cirri with 10-18 joints *Langerhansia cornuta* (3)
- Blades of setae decrease evenly in length, dorsal cirri otherwise *Typosyllis* 41
41. — Setae unidentate or minutely bidentate, dorsal cirri stout with 8-12 joints *T. armillaris* (3)
- Setae strongly bidentate; dorsal cirri otherwise 42
42. — Dorsal cirri short, with 7-12 joints *T. cf. hyalina* (3)
- Dorsal cirri with more than 20 joints *T. variegata* (13)
43. — Palps fused basally; dorsal cirri usually smooth 44
- Palps fused for at least half their length; dorsal cirri smooth. 45
44. — Pharynx unarmed; ventral cirri longer than setigerous lobes; acicula of anterior parapodia enlarged, knobbed *Streptosyllis* sp.
- Pharynx with a semicircle of recurved teeth; ventral cirri not longer than setigerous lobes; acicula not knobbed *Odontosyllis* sp.
45. — Dorsal cirri papilliform; 1 pair of rudimentary tentacular cirri *Exogone* 46
- Dorsal cirri flask-shaped; 1 pair of tentacular cirri *Sphaerosyllis* 48
46. — Dorsal cirrus present on setiger 2, single superior compound seta with dagger-like blade *Exogone* sp.
- Dorsal cirrus absent on setiger 2; superior compound setae different from rest 47
47. — Superior compound setae with swollen shaft-head and broad triangular blade *E. heterosetosa* (3)
- Three to five superior compound setae with dagger-like blades *E. cf. gemmifera* (13)
48. — Body surface and parapodia covered with minute papillae 49
- Body surface and parapodia without papillae 50
49. — Dorsal cirrus on setiger 2 *S. cf. semiverrucosa* (13)
- Dorsal cirrus absent from setiger 2 *Sphaerosyllis* sp.

50.	—Dorsal cirrus on setiger 2	<i>Sphaerosyllis</i> sp.	
	—Dorsal cirrus absent from setiger 2	<i>S. sublaevis</i>	(3)
51.	—Body papillose, head indistinct; pharynx unarmed . .	F. Sphaerodoridae- <i>Sphaerodoridium</i> sp.	
	—Body smooth, head distinct; pharynx with two or more pairs of jaws		52
52.	—Peristomium with parapodia and setae		53
	—Peristomium without parapodia or setae		59
53.	—Prostomium pentagonal, body square in section; parapodia with lamellae	F. Nephtyidae	54
	—Prostomium a pointed cone, body circular in section; parapodia without lamellae		56
54.	—Prostomium produced anteriorly; long flowing setae.	<i>Nephtys longipes</i>	(16)
	—Prostomium not produced anteriorly; setae short		55
55.	—Branchiae recurved, from setiger 4; pharynx with 22 longitudinal rows of papillae and single median papilla	<i>N. australiensis</i>	(16)
	—Branchiae recurved, from setiger 5; pharynx with 20 longitudinal rows of papillae and no single median papilla	<i>N. inornata</i>	(16)
56.	—Pharynx with four horny jaws; parapodia all alike and body not divided into regions	F. Glyceridae	57
	—Pharynx with a pair of toothed jaws and a circle of denticles; body divided into different regions	F. Goniadidae	58
57.	—Branchiae non-retractile, simple; pharyngeal papillae of two types, one with distal flange	<i>Glycera tridactyla</i> *	(3)
	—Branchiae retractile, branched; pharyngeal papillae of two types, without distal flange	<i>G. americana</i>	(13)
58.	—Body divided into three regions, parapodia biramous after setiger 34	<i>Glycinde armigera</i>	(9)
	—Body divided into three regions, parapodia biramous after setiger 30	<i>Glycinde</i> sp.	
59.	—Dorsal cirri and antennae present		60
	—Dorsal cirri absent or rudimentary; antennae usually absent	F. Lumbrineridae	66
60.	—Maxillae of four or five paired plates, plates III and IV fused on right side; antennae variable; branchiae usually present		61
	—Maxillae of numerous small elements in two or four longitudinal series, two antennae and two cylindrical palps; branchiae absent	F. Dorvilleidae	67
61.	—One to five antennae, without ringed ceratophores . .	F. Eunicidae	62
	—Seven antennae, posterior five with long, ringed ceratophores	F. Onuphidae	65
62.	—One antenna; branchiae and tentacular cirri absent	<i>Nematonereis</i> cf. <i>unicornis</i>	(3)
	—Five antennae; branchiae present		63
63.	—Tentacular cirri absent; anterior margin of prostomium bilobed; comb setae absent, compound setae spinigerous, acicular setae bidentate	<i>Marphysa sanguinea</i>	(13)
	—Tentacular cirri present	<i>Eunice</i>	64
64.	—Anterior margin of prostomium deeply notched, antennae deeply jointed; branchiae begin on setigers 3-8; comb setae present, compound setae falcigerous, acicular setae tridentate	<i>E. australis</i>	(13)

**Glycera convoluta* Keferstein is synonymous with *G. tridactyla* Schmarda

- Anterior margin of prostomium shallowly notched, antennae nearly smooth; branchiae from setiger 3; comb setae present, compound setae falcigerous, acicular setae tridentate *E. vittata* (3)
65. —Branchial filaments arranged spirally, from setiger 5, pseudocompound hooks unidentate or with secondary tooth very weak *Diopatra* cf. *neapolitana* (3)
- Branchial filaments arranged spirally, from setiger 5; pseudocompound hooks bidentate *Diopatra* sp.
66. —Prostomium conical, body elongate; hooded hooks jointed in first few parapodia, later hooks simple; body reddish or orange *Lumbrineris latreilli* (13)
- Prostomium conical, body elongate; hooded hooks jointed in first few parapodia, later hooks simple; body green *Lumbrineris* sp.
67. —Parapodia uniramous with ovoid dorsal cirri, no cirrophores or notoacacula *Protodorvillea* sp.
- Parapodia sub-biramous with dorsal cirri mounted on ceratophores containing notoacacula *Dorvillea australiensis* (1)
- Polychaeta Sedentaria
68. —Head not greatly modified; prostomium well developed; peristomium sometimes with pair of palps. 69
- Head modified by development of frilly membrane, buccal tentacles or a branchial crown; prostomium often reduced. 155
69. —Buccal segment with palps or tentacles 70
- Buccal segment without food gathering appendages 124
70. —Buccal segment with pair of adhesive palps (often broken off) or several grooved tentacles 71
- Buccal segments with tentacles retractile into the mouth F. Ampharetidae 160
71. —Hooded hooks present in posterior setigers; well developed parapodia 72
- Hooded hooks entirely absent; parapodia often poorly developed 108
72. —Head not flattened, branchiae often present; palps grooved; posterior notosetae hooded hooks F. Spionidae 73
- Head flattened and spade-shaped; palps papillose, notosetae hooded hooks from setiger 9. F. Magelonidae 106
73. —Setiger 5 with strongly modified setae 74
- Setiger 5 without modified setae 85
74. —Branchiae first present posterior to setiger 5 75
- Branchiae first present anterior to setiger 5 83
75. —Setiger 5 slightly to moderately modified parapodia. *Pseudopolydora* 76
- Setiger 5 greatly modified, with reduced parapodia 77
76. —Prostomium entire; neuropodial hooded hooks from setiger 8 *P. paucibranchiata* (2)
- Prostomium incised; bidentate neuropodial hooded hooks from setiger 8 *P. kempfi* (2)
77. —Setiger 5 with spines of one type with or without companion capillary setae *Polydora* 78
- Setiger 5 with spines of two types *Carazziella* 82
78. —Setiger 5 with brush-tipped companion setae; specialized posterior notosetae absent *P. penicillata* (13)
- Setiger 5 without brush-tipped companion setae; specialized posterior notosetae present or absent 79

79. — Hooded hooks with constriction on shaft *P. haswelli* (2)
 — Hooded hooks without constriction on shaft 80
80. — Posterior notopodial spines form dense packets of needles; gizzard absent; major spines of setiger 5 with weak subterminal swelling; eyes absent *P. flava* (2)
 — Posterior notopodial spines absent 81
81. — Gizzard present internally in setigers 18-19, seen externally as a swelling; major spines of setiger 5 with subterminal boss; eyes present *P. socialis* (2)
 — Gizzard absent; major spines of setiger 5 falcate, simple; eyes absent. *Polydora* sp.
82. — Hooded hooks from setiger 7; superior dorsal fascicle of notosetae with fimbriated setae *C. hirsutiseta* (2)
 — Hooded hooks from setiger 8; superior dorsal fascicle of notosetae with simple setae *C. victoriensis* (2)
83. — Major spines of setiger 5 of two types, first with expanded ends bearing bristles, second simple, falcate *Boccardia chilensis* (2)
 — Major spines of setiger 5 of one type, simple, falcate, with smaller companion setae *Boccardiella* 84
84. — Branchiae from setiger 2 onwards except for setigers 4 and 5 *B. bihamata* (2)
 — Branchiae from setiger 2 onwards, on setiger 5 may be rudimentary. *B. limnicola* (2)
85. — Prostomium distally pointed 86
 — Prostomium not distally pointed, with lateral or frontal horns, anterior margin broadly rounded or incised 90
86. — Branchiae beginning on setiger 1, continuing almost to posterior end *Australospio trifida* (2)
 — Branchiae beginning on setiger 2, continuing over variable number of setigers 87
87. — Branchiae completely free from dorsal lamellae, absent posteriorly *Aonides oxycephala* (2)
 — Branchiae fused to dorsal lamellae and continuing to end of body *Scolecopsis* 88
88. — Notoetae present on setiger 1, neuropodial hooks quadridentate *S. precirriseta* (2)
 — Notoetae absent on setiger 1, neuropodial hooks otherwise 89
89. — Hooded hooks multidentate, from setiger 14-15, in neuropodia only. *S. towra* (2)
 — Hooded hooks bidentate, from setiger 24, probably only in neuropodia *S. vexillatus* (as *Pseudomalacoceros vexillatus*) (13)
90. — Prostomium with lateral or frontal horns. 91
 — Prostomium without lateral or frontal horns 94
91. — Branchiae from setiger 1. *Malacoceros* 92
 — Branchiae from setiger 2. *Rhynchospio*
92. — Bidentate ventral hooded hooks from setiger 22. *M. divisus* (13)
 — Tridentate ventral hooded hooks from setiger 11 or later. 93
93. — Body with dark brown pigment; tridentate ventral hooded hooks from setiger 25 *M. tripartitus* (2)
 — Body colourless; tridentate ventral hooded hooks from setiger 11 *Malacoceros* sp.

94.	— Branchiae limited to middle and posterior setigers except for one pair on setiger 2 in males	<i>Pygospio elegans</i>	(3)
	— Branchiae from setiger 1 or 2		95
95.	— Branchiae concentrated in setigers 1-22		96
	— Branchiae present over most of body		104
96.	— Branchiae from setiger 1		97
	— Branchiae from setiger 2	<i>Prionospio</i>	98
97.	— Three pairs of pinnate branchiae; dorsal ridge across setiger 1	<i>Paraprionospio</i> sp.	
	— Eighteen to 22 pairs of cirriform branchiae; no dorsal ridge on setiger 1	<i>Orthoprionospio cirriformia</i>	(2)
98.	— Branchiae all cirriform	<i>P. cirrifera</i>	(2)
	— Branchiae otherwise		99
99.	— Branchiae all pinnate		100
	— Branchiae both pinnate and cirriform		101
100.	— Three pairs of pinnate branchiae; low dorsal crest on setiger 7	<i>P. aucklandica</i>	(2)
	— Four pairs of pinnate branchiae, dorsal crests absent	<i>P. multipinnulata</i>	(2)
101.	— First and third pairs of branchiae pinnate (pinnules sparse), second and fourth pairs cirriform	<i>P. paucipinnulata</i>	(2)
	— Branchiae otherwise		102
102.	— First three pairs of branchiae cirriform, fourth pair pinnate	<i>P. tridentata</i>	(2)
	— First and fourth pairs of branchiae pinnate, second and third pairs cirriform		103
103.	— Dorsal transverse crest on setiger 7 only	<i>P. fallax</i>	(6)
	— Dorsal transverse crests from setiger 7 to about 30	<i>P. multicristata</i>	(13)
104.	— Branchiae from setiger 1	<i>Spio</i>	105
	— Branchiae from setiger 2	<i>Laonice</i> sp.	
105.	— Neuropodial hooded hooks from setiger 10-11, bidentate; body colourless	<i>S. filicornis</i>	(3)
	— Neuropodial hooded hooks from setiger 9-11, tridentate; anterior body brown pigmented	<i>S. pacifica</i>	(2)
106.	— Hooded hooks from setiger 9, tridentate (MF:2), accompanied by single short hooded hook per fascicle	<i>Magelona dakini</i>	(13)
	— Hooded hook from setiger 9, bidentate or multidentate		107
107.	— Hooded hooks multidentate, all hooks within a fascicle similar in size	<i>Magelona</i> sp.	
	— Hooded hooks bidentate (MF:1), all hooks within a fascicle similar in size	<i>Magelona</i> sp.	
108.	— Long filamentous branchiae at least on anterior segments; parapodia reduced to ridges	F. Cirratulidae	109
	— Branchiae not long and filamentous; parapodia not in the form of ridges		121
109.	— Two large grooved tentacular filaments		110
	— Several grooved tentacular filaments		116
110.	— Capillary setae only present	<i>Tharyx</i>	111
	— Acicular hooks and capillaries present		112
111.	— Branchial filaments in middle of body arise laterally just above notosetae	<i>T. marioni</i>	(3)
	— Branchial filaments in middle of body arise from mid dorsal line	<i>T. dorsobranchiata</i>	(3)
112.	— Acicular setae of posterior noto- and neuropodia		

- continuous to form two lateral arcs, on either side of body; acicular hooks present in only last 40 setigers, increasing rapidly to 5-6 per fascicle plus 5-6 capillaries..... *Chaetozone* sp.
- Posterior noto- and neurosetae remain in separate bundles *Caulleriella* 113
113. —Neuropodial hooks from setiger 3 *Caulleriella bioculatus* (3)
 —Neuropodial hooks from setiger 3 or later 114
114. —Neuropodial hooks from setiger 4, bidentate *Caulleriella tricapillata* (13)
 —Neuropodial hooks from setiger 31 or later, bidentate 115
115. —Neuropodial hooks from setiger 31, minutely multidentate, accompanied by capillaries; single acicular seta present in posterior segments; elliptical eye spot *Caulleriella* sp.
 —Neuropodial hooks from setiger 34, multidentate by setiger 71, accompanied by capillaries; simple acicular hooks posteriorly, sigmoid anteriorly; pair of dark eye spots. *Caulleriella* sp.
116. —Branchial filaments arise on same segment as tentacular cirri. *Cirratulus* 117
 —Branchial filaments arise on all segments anterior to tentacular cirri. *Cirriformia* 119
117. —Tentacular filaments arise above setigers 4-6. *Cirratulus chrysoderma* (3)
 —Tentacular filaments arise otherwise. 118
118. —Tentacular filaments arise above setigers 6-10; acicular setae absent, capillaries throughout; anterior heavily pigmented. *Cirratulus nuchalis* (5)
 —Tentacular filaments arise above setiger 3; sigmoid hooks and capillaries present *Cirratulus* sp.
119. —Tentacular filaments arise above setigers 3-4. *Cirriformia capensis* (3)
 —Tentacular filaments arise above setigers 4-6 or 5-7 120
120. —Tentacular filaments arise above setigers 4-6; capillaries throughout, sigmoid hooks by setiger 12 .. *Cirriformia filigera* (3)
 —Tentacular filaments arise above setiger 4-6 or 5-7; capillaries throughout, sigmoid hooks from setiger 50 *Cirriformia tentaculata* (3)
121. —Noto- and neuropodia of anterior parapodia well developed, setiger 1 with elongate setae directed forwards F. Trochochaetidae-
Poecilochaetus serpens (3)
 —Anterior setigers uniramous, neuropodia lacking; posterior setigers biramous with neurosetae as minute uncini F. Chaetopteridae 122
122. —Middle region with bilobed notopodia; no tentacular cirri *Spiochaetopterus* sp.
 —Middle region with notopodia never bilobed; no tentacular cirri. 123
123. —Body large; palps short; some notopodia of middle region fused to form paddles; parchment tube *Chaetopterus variopedatus* (3)
 —Body small; palps large; notopodia of middle regions never fused; fragile sandy tube; often living in dense colonies *Mesochaetopterus minutus* (3)
124. —Dentate crested hooks absent 125
 —Dentate crested hooks present in posterior segments if not earlier 138
125. —Capillary setae crenulate F. Orbiniidae 126
 —Capillary setae smooth 132

126. — Prostomium round; change from thorax to abdomen about setiger 28 *Naineris grubei australis* (4, 13) 127
- Prostomium pointed; thorax of less than 23 setigers 127
127. — Thorax with several foot papillae and many stomach papillae *Phylo felix* (4, 13) 128
- Thorax with 1-2 foot papillae, no stomach papillae 128
128. — No anterior row of hooks among thoracic neurosetae. *Leitoscoloplos* 129
- Anterior row or rows of hooks among thoracic neurosetae 130
129. — Thorax of 19-22 setigers; branchiae from setigers 8-11 *L. bifurcatus* (4, 13)
- Thorax of 14-15 setigers; branchiae from setigers 15-16 *L. normalis* (4, 13)
130. — Single row of slender hooks among thoracic neurosetae *Scoloplos (Scoloplos)* 131
- Three to four rows of hooks among thoracic neurosetae *Scoloplos (Leodamas) johnstonei* (4)
131. — Thorax of 13-17 setigers; branchiae from setiger 9-11 *Scoloplos (S.) simplex* (4, 13)
- Thorax of 16-18 setigers; branchiae from setiger 12-15 *Scoloplos (S.) sp.*
132. — A single long filiform branchia arising from dorsum of setiger 2 or 3. F. Cossuridae-Cossura sp. 133
- Branchiae, if present, not single and median. 133
133. — Capillaries winged in anterior segments; median antenna may be present F. Paraonidae 134
- Capillaries not winged; median antenna never present. 135
134. — Prostomium with median dorsal antenna; specialized setae, 4 curved unidentate hooks among capillaries of posterior neuropodia *Aricidea fauveli* (3)
- Prostomium without an antenna; specialized setae among capillaries of posterior neuropodia. *Paraonis sp.*
135. — Prostomium a tapered cone; body fusiform, often grooved ventrally F. Opheliidae 136
- Prostomium notched or lobed; body swollen anteriorly but not grooved ventrally F. Scalibregmidae 137
136. — Ventral groove present; branchiae present from setiger 2 for about 24-25 setigers; eye spots between parapodium of middle segments *Armandia intermedia* (3)
- Ventral groove present, branchiae absent; eye spots absent *Polyophthalmus pictus* (3)
137. — Body arenicoliform; posterior parapodia lack ventral and dorsal cirri; branchiae absent *Hyboscolex dicranochaetus* (14)
- Body arenicoliform; posterior parapodia with both ventral and dorsal cirri; branchiae absent. *Pseudoscalibregma sp.*
138. — Body resembles an earthworm; dentate crested hooks with hoods F. Capitellidae 139
- Body does not resemble an earthworm; dentate crested hooks without hoods 149
139. — Genital setae present in both sexes on setigers 8-9; thorax of 10 setigers *Capitellides jonesi* (13)
- Genital setae absent or only present in males; thorax of 9 setigers 140
140. — Genital setae present in males; thorax of nine

	setigers; capillaries in anterior thoracic setigers, hooks thereafter	<i>Capitella</i>	141	
	— Genital setae absent; ten or more thoracic setigers.		142	
141.	— Body colourless; when preserved.	<i>C. capitata</i>		(3)
	— Body with bright red pigment spots.	<i>Capitella</i> sp.		
142.	— Ten thoracic setigers, with capillaries in setigers 1-4 and hooks in setigers 5-10	<i>Mediomastus californiensis</i>		(13)
	— More than ten thoracic setigers		143	
143.	— Eleven thoracic setigers.		144	
	— More than 11 thoracic setigers		148	
144.	— Thoracic setigers all capillaries	<i>Notomastus</i>	145	
	— Thoracic setigers with capillaries and hooded hooks		147	
145.	— Neurosetae present on first thoracic setiger	<i>Notomastus</i> sp.		
	— Neurosetae absent on first thoracic setiger		146	
146.	— Eyes embedded in segment 1; globular branchiae present on posterior abdominal setigers.	<i>N. torquatus</i>		(13)
	— Elliptical eye spots on segment 1; often purple in colour; branchiae absent	<i>Notomastus</i> sp.		
147.	— Thoracic setigers 1-5 with capillaries, 6-11 with hooks	<i>Heteromastus filiformis</i>		(13)
	— Thoracic setigers 1-6 with capillaries, 7-11 with hooks	<i>Barantolla lepte</i>		(13)
148.	— Twelve thoracic setigers; abdomen ends in anal plate; branchiae absent			
	— Thirteen thoracic setigers; no anal plate; retractile branchiae	<i>Scyphoproctus djiboutiensis</i>		(3)
		<i>Dasybranchus</i> sp.		
149.	— Middle setigers greatly elongated, never annulated; branchiae rare	F. Maldanidae	150	
	— Middle setigers not greatly elongated but annulated; branchiae present.	F. Arenicolidae	154	
150.	— Cephalic plate absent; cephalic ridge well marked; pygidium petaloid with central anus	<i>Petaloproctus</i> sp.		
	— Cephalic plate well defined, surrounded by raised margin; pygidium variable.		151	
151.	— Pygidium as a slanting plate with a dorsal anus above it, anal cirri absent	<i>Asychis</i> sp.		
	— Pygidium encircled by anal cirri with anus sunken in a funnel		152	
152.	— Neurosetae of setigers 1-3, four dentate crested hooks similar to subsequent ones	<i>AxiotHELLa</i> sp.		
	— Neurosetae of setigers 1-3, four acicular setae, different from subsequent ones	<i>Euclymene</i>	153	
153.	— Setigers 1-3 with simple smooth acicular neurosetae; 2 achaetous pre-anal segments; anal funnel with 27-29 equal cirri plus one longer	<i>E. trinalis</i>		(11)
	— Setigers 1-3 with simple smooth acicular neurosetae; five achaetous pre-anal segments; anal funnel with all cirri equal in size	<i>Euclymene</i> sp.		
154.	— Branchiae from setiger 20, branchiferous segments with two annuli; animal small not exceeding 40mm	<i>Branchiomaldane</i> sp.		
	— Branchiae from setiger 7-17, branchiferous segments with five annuli; animal large.	<i>Arenicola bombayensis</i>		(13)
155.	— Head with frilled food gathering membrane; lives in firm sandy tube	F. Oweniidae- <i>Owenia fusiformis</i>		(3)
	— Head without frilled food gathering membrane.		156	
156.	— Head with stout setae	F. Flabelligeridae	157	
	— Head without stout setae.		159	

157. —Neurosetae simple hooks; branchiae filamentous, arise in single marginal row from cephalic hood *Pherusa* sp.
 —Neurosetae not simple hooks; branchiae filamentous or cirriform arise in 2 or more rows 158
158. —Neurosetae annulated with bent or minutely hooked tips; a few stout branchiae in 2 distinct groups *Diplocirrus* sp.
 —Neurosetae stout compound hooks; numerous fine branchiae in several irregular rows *Flabelligera* sp.
159. —Head with soft tentacles for deposit feeding; branchiae present 160
 —Head with branchial crown for suspension feeding; segmental branchiae absent 179
160. —Tentacles retractile into mouth, either grooved or papillose F. Ampharetidae 161
 —Tentacles not retractile into mouth, grooved, never papillose 164
161. —Stout postbranchial hooks present; paleae absent; buccal tentacles smooth *Isolda pulchella* (3)
 —Stout postbranchial hooks absent; paleae present 162
162. —Buccal tentacles papillose *Pseudoamphicteis papillosa* (12)
 —Buccal tentacles smooth 163
163. —Glandular ridges present; four pairs of smooth gills; 14 uncinigerous thoracic segments; body with green pigment spots *Amphicteis dalmatica* (13)
 —Glandular ridges absent; three pairs of smooth gills; 12 uncinigerous thoracic segments *Samythella* sp.
164. —Branchiae absent; tentacular lobe expanded F. Terebellidae
 SF. Polycirrinae 165
 —Branchiae present; tentacular lobe expanded or compact 167
165. —Abdominal setae completely absent *Lysilla* 166
 —Abdominal setae restricted to acicular notosetae *Amaeana trilobata* (12)
166. —Ten thoracic setigers; notosetae simple smooth capillaries, neurosetae absent *L. apheles* (11)
 —Nine to 12 thoracic setigers; notosetae barbed, neurosetae absent *L. pacifica* (12)
167. —Tentacular lobe and peristomium compact F. Terebellidae 168
 —Either tentacular lobe or peristomium expanded F. Trichobranchidae 178
168. —Branchiae simple filaments on setigers 1-3 169
 —Branchiae branched or club shaped on setigers 1-3 174
169. —Uncini of first four rows, heavily chitinized long-handled hooks; following ones avicular *Hadrachaeta aspeta* (12)
 —Uncini all avicular with forwardly projecting bases 170
170. —Notoetae from segment 2 (first branchiferous) *Streblosoma* 171
 —Notoetae from segment 3 (second branchiferous) 172
171. —Twenty-five—29 pairs of notosetae; three pairs of branchiae forming continuous band across dorsum *S. acymatum* (13)
 —Twenty-one pairs of notosetae; two pairs of branchiae with distinct median gap separating left and right hand pairs *Streblosoma* sp.
172. —Notoetae from segment 3 (second branchiferous); uncini from setiger 3 *Thelepus* 173
 —Notoetae from segment 3 (second branchiferous); uncini from setiger 6 *Rhinothelepus lobatus* (11)
173. —Notoetae terminate halfway along abdomen, uncini

	with terminal button; branchiae of numerous filaments	<i>T. setosus</i>	(3)
	—Notosetae more than 20 pairs; uncini otherwise; three pairs of branchiae with few branchial filaments arising on horizontal ridges, filaments of first extend laterally	<i>Thelepus</i> sp.	
174.	—Branchiae club-shaped; anterior uncini avicular but base produced backwards as long shaft	<i>Pista typha</i>	(12)
	—Branchiae branched; all uncini similar, either avicular or pectiniform		175
175.	—Notosetae with smooth tips		176
	—Notosetae with denticulate tips		177
176.	—Lateral lobes absent on segments 2-4; uncini avicular	<i>Nicolea</i> sp.	
	—Lateral lobes present on segments 2-4; uncini pectiniform	<i>Loimia medusa</i>	(12)
177.	—Lateral lobes absent; notosetae from segment 3 (second branchiferous)	<i>Neoleprea</i> sp.	
	—Lateral lobes absent; notosetae from segment 4 (third branchiferous)	<i>Terebella</i> sp.	
178.	—Expanded tentacular lobe; compact peristomium; single branchiae with stout trunk bearing four lamellate lobes	<i>Terebellides stroemi</i>	(3)
	—Compact tentacular lobe; peristomium forming conspicuous proboscis; branchiae simple filaments on setigers 1-3.	<i>Artacamella dibranchiata</i>	(12)
179.	—Tube sandy or muddy; an operculum never present among radioles	F. Sabellidae	180
	—Tube calcareous; stalked operculum usually present	F. Serpulidae	183
180.	—Thoracic neurosetae single row of long-shafted hooks; last few abdominal segments form a spoon-shaped cavity	<i>Euchone</i> sp.	
	—Thoracic neurosetae avicular; posterior abdominal segments not modified		181
181.	—Thoracic neurosetae avicular uncini with pick-axe setae; collar replaced by triangular projection	<i>Amphiglena pacifica</i>	(13)
	—Thoracic neurosetae avicular uncini without pick-axe setae		182
182.	—Thoracic notosetae include subspathulate setae	cf. <i>Laonome</i> sp.	
	—Thoracic notosetae winged capillaries only; branchial radioles with stylodes; body with segmental eye spots and irregular dark pigment.	<i>Branchiomma nigromaculata</i>	(13)
183.	—Thorax of 3-4 segments; tube small, spirally coiled	<i>Janua</i>	184
	—Thorax of 5 or more segments; tube straight or sinuous		185
184.	—Tube with one to four longitudinal ridges; operculum with peripheral bilobed talon	<i>J. (Dexiospira) brasiliensis</i>	(13)
	—Tube with three longitudinal ridges; operculum concave	<i>J. (Dexiospira) foraminosa</i>	(13)
185.	—Collar setae bayonet; operculum stalk slender, wingless, operculum with basal funnel or fused radii plus central crown of 10-20 equal horny spines with lateral spinules	<i>Hydroides elegans</i> *	(3)
	—Collar setae very short and fine; operculum winged, operculum with three-four basal plates from base of which arise nine moveable spines, inner smooth, outer spined	<i>Galeolaria caespitosa</i>	(17)

**Hydroides norvegica* Gunnerus is synonymous with *H. elegans* (Haswell)

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